

REMARKS

Preliminary Remarks:

Upon entry of this Amendment, claims 1 to 4 and 6 to 35 will be pending of which claim 1 is independent. Claim 5 is cancelled without prejudice to, or disclaimer of, the underlying subject matter. Claims 1 and 2 are amended to, *inter alia*, a size selection of powder particles having a granulometric cross-section not more than 5 μm (claim 1) and a median diameter of the powder particles between 1 μm and 0.005 μm (claim 2). Claim 13 is amended to further clarify that the claimed water soluble copolymers are acrylic. Support for the claim amendments may be found in the specification as filed. *See, for example*, page 16, lines 8 to 12. Therefore, no new matter is added.

Applicants thank the Examiner for the withdrawal of the rejection of claim 27 under 35 U.S.C. § 112, second paragraph.

This Amendment is accompanied by a Request for Continued Examination (RCE) under 37 C.F.R. § 1.114.

Claim Rejections:

Rejection under non-statutory obviousness-type double patenting

Claims 1 to 35 were provisionally rejected under the judicially created non-statutory obviousness-type double patenting as being unpatentable over claims 1 to 31 of co-pending U.S. Pat. Appl. No. 10/576,256 in view of de Feraudy (U.S. Pat. No. 6,460,788). Claim 5 is cancelled and Applicants respectfully request that this rejection over the remaining claims either be held in abeyance until the current application is in condition for allowance.

Rejection under 35 U.S.C. § 112

Claims 13 to 26 were rejected under 35 U.S.C. § 112, second paragraph, as allegedly being indefinite. Applicants respectfully submit that this rejection is moot as a result of the amendments to the claims.

Claims 13 to 26 are amended to indicated that when $n = 0$, one of R_9 and R_{10} are hydrogen and the other is a carboxylic group, and when $n \neq 0$, R_9 and R_{10} are simultaneously hydrogen, or one is hydrogen and the other is a carboxylic group, a C_1 to C_{12} ester, a C_1 to C_{12} alkyl, a C_5 or C_6 aryl, or an alkylaryl. Applicants respectfully submit that, as amended, claims 13

to 26 are not indefinite under 35 U.S.C. § 112, second paragraph, and respectfully request withdrawal of this rejection.

Rejections under 35 U.S.C. § 103

Claims 1 to 11 and 28 to 35 were rejected under 35 U.S.C. § 103(a) as being unpatentable over de Feraudy (U.S. Pat. No. 6,460,788) in view of Allen (WO 2004/009200). Claim 5 is cancelled, and Applicants respectfully traverse this rejection with respect to claims 1 to 4, 6 to 11, and 28 to 35.

Applicants have previously argued that the density differential achieved by de Feraudy's separation method is no more than 0.03 and because a finer density differential cannot be attained with de Feraudy's density multi-stage separation, all the mixtures of separated materials are treated in one or several parallel additional separations and purification lines comprising stages arranged in series. The Examiner admits that de Feraudy is silent on the size of the inorganic compounds/powder particles, circulating flow rate and precision level of the density reading. The Examiner uses Allen for the disclosure of particle size ranges from 5 to 30 µm.

As amended, claims 1 to 4, 6 to 11, and 28 to 35 are directed to a method for selective separation comprising separating a mix of organic synthetic materials by density difference in an aqueous suspension, wherein the separative suspension is made selective, stable and invariant, with respect to the density level threshold chosen for the selective separation, *inter alia*, by the size selection of powder particles having a granulometric cross-section of no more than 5 µm. Allen teaches away from particle sizes of not more than 5 µm because Allen makes clear that particles finer than 5 to 30 µm are removed to avoid foaming and surface contamination. *See*, Allen at page 11, line 9 to page 13, line 17. In particular, Allen states:

Thus, a particulate media used in a slurry to sort mixture particles which contains a greatly reduced number of media particles less than 5 microns should be less likely to contaminate the plastic surface. Washing samples of plastic in slurries which contain greater and lesser amounts of media particles less than 5 microns demonstrates that the plastics washed with slurries with particles smaller than 5 microns have higher contamination rates than plastics washed with slurries including particles greater than 5 micros. The fewer fine media particles present, the less the slurry tends to contaminate the plastic surface.

There are a number of separation techniques, such as triboelectrostatic separation and froth flotation, that rely on a clean plastic surface. By stripping fine particles less than 5 microns from a slurried density separation media, the

performance of triboelectric charging is greatly enhanced, because of the media does not contain particles that adhere to the surface of the mixture particles (and thus does not alter the behavior of the mixture particles in the separation device), and the abrasive cleaning that coarse media particles perform.

Allen at page 13, lines 3 to 17, emphasis added.

In other words, one of ordinary skill in the art reading the disclosure of Allen, would use particle sizes greater than 5 μm and would be discouraged from using particle sizes smaller than 5 μm . Therefore, *even if* one of ordinary skill in the art combined the disclosures of de Feraudy and Allen, the combination would not result in the method claimed in claims 1 to 4, 6 to 11, and 28 to 35 because the combination would be using particles with sizes greater than 5 μm . In conclusion, Applicants respectfully submit that claims 1 to 4, 6 to 11, and 28 to 35 are not unpatentable over de Feraudy in view of Allen and respectfully request withdrawal of this rejection.

Claims 12 to 27 were rejected under 35 U.S.C. § 103(a) as being unpatentable over de Feraudy in view of Allen and further in view of Boutin *et al.* (U.S. Pat. No. 4,504,643). Applicants respectfully traverse.

Boutin *et al.* do not overcome the deficiencies of either de Feraudy or Allen. For example, Boutin *et al.* do not disclose using powder particles having a granulometric cross-section of no more than 5 μm . Therefore, Applicants respectfully submit that claims 12 to 27 are not unpatentable over de Feraudy in view of Allen and further in view of Boutin *et al.* and respectfully request withdrawal of this rejection.

CONCLUSION

In view of the amendments and remarks above, Applicants respectfully submit that this application is in condition for allowance and request favorable action thereon. The Examiner is invited to contact the undersigned if any additional information is required.

As this response is filed within the shortened statutory period for reply, Applicants believe that no fee, other than the RCE fee, is due. If additional fees are required, they may be charged to Deposit Account No. 50-4254, referencing Attorney Docket No. 2901653-000014.

Respectfully submitted,

BAKER, DONELSON, BEARMAN, CALDWELL
& BERKOWITZ, P.C.



Gautam Prakash, Ph.D.
Registration No.: 53,481
Direct Telephone No.: 202-508-3423

Susan E. Shaw McBee
Registration No. 39,294

Customer No.: **84331**

555 Eleventh Street, N.W.
Sixth Floor
Washington, DC 20004

Telephone: 202-508-3400
Facsimile: 202-508-3402